

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US04/38235

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC(7) : C23C 16/00 US CL : 118/715, 726 According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) U.S. : 118/715, 726 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) US-PGPUB, USPAT, USOCR, EPO, JPO, DERWENT, IBM_TDB		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,553,022 (COLOMBO) 12 Nov 1985, Column 2, Line 30 - Column 4, Line 7	1-18
Y	US 2,993,814 (EPPRECHT et al) 25 July 1961, Column 2, Lines 56-70	1-18
Y	US 4,810,526 (ITO et al) 7 Mar 1989, Column 1, Lines 10-15	2, 3
Y	US 6,162,300 (BICHT) 19 Dec 2000, Column 4, Lines 21-55	6-8, 15
A	US 4,239,955 (CHO et al) 16 Dec 1980, whole document	1-18
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 01 June 2005 (01.06.2005)		Date of mailing of the international search report <b>15 JUN 2005</b>
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230		Authorized officer Parviz Hassanzadeh <i>PH</i> Telephone No. (571) 272-1435